

Utility Patent Application of

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For

Rapid Refilling Device for Paintball Ammunition Pods.

CROSS-REFERENCE TO RELATED APPLICATIONS

Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable.

REFERENCE TO SEQUENCE LISTING, A TABLE, OR A COMPUTER PROGRAM LISTING

COMPACT DISK APPENDIX

Not applicable.

BACKGROUND OF THE INVENTION

(001)This application claims priority over the provisional patent application entitled "Rapid Refilling Device for Paintball Ammunition Pods" filed on September 9, 2002 (file number 60/409,021). This invention relates to the field of paintball marking guns, specifically to aid the user of said guns to rapidly refill the ammunition magazines, otherwise known as "pods", with paintball projectiles.

(002)For many years devices known as paintball guns or "markers" have been utilized by ranchers and loggers to mark trees, cattle, and other objects to differentiate them from the others and identify them for them for cutting, branding, medication, and many other tasks. The marking is accomplished by shooting

a paint-filled projectile at the object. When the paintball strikes the object, it bursts open, releasing the colored paint or dye, thus marking the object.

(003)Recently many people have been using paintball guns for purely recreational reasons. In many parts of the world the sport of paintball shooting is rapidly growing in popularity. Many different game formats are used but most are variants of military war games in which individuals attempt to shoot opposing players with paintball projectiles.

(004)Modern paintball guns fire the projectiles using compressed CO<sub>2</sub> gas or compressed air. These guns have semi-automatic firing mechanisms and are capable of firing a large number of projectiles in rapid succession. The paintball gun's storage chamber or "hopper" has a capacity of approximately 200 balls, which can be discharged by the shooter in a matter of seconds. Because of the limited capacity of the paintball gun's hopper, the user must carry additional paintballs to refill the hopper when it is empty. Most players utilize ammunition magazines known as "pods" to store and carry the additional ammunition needed for the game. Typically, these pods are pre-loaded by the player prior to the game. It is important for the player to be able to rapidly and easily refill the pods, either during the game or prior to the game. It is also important that few, if any balls are spilled in the filling process, because a ball contaminated with dirt or sand cannot be used without running the risk of damaging the gun. The paintballs typically come from the factory packaged in plastic bags in quantities of approximately 500 balls. It is difficult for the paintball player to quickly and precisely pour the appropriate number of balls from the plastic packages into the pods or hoppers without spilling them.

(005)The prior art relating to this application is narrow in scope and distant in similarity. Parks, Gerald R. (U.S. Patent number 6,234,157) shows a "Paintball Gun Loader Speed Collar" which is described in the abstract as; "A container which can be held and opened by one hand has a dome-

shaped cap formed by a series of adjacent, contiguous and ogee-shaped segments resiliently held together by an elastic ring. When the cap is forced down over the opening rim of the vessel, the ogee-shaped segments separate to expose the vessel opening. A similar cap mounted in the inverse direction in the inlet of a paintball-shooting gun magazine opens when contacted by the rim of a paintball container from which the magazine is being reloaded.”

(006)The similarity between the Parks device and the White device shown in this application is the use of a multi-segmented collar. The White device, unlike that of Parks, is designed to fit inside of the receiving vessel. Additionally, the White device does not utilize an elastic ring to provide tension. Finally, the Parks device is designed to rapidly fill paintball hoppers, where the White device is specifically designed to rapidly fill paintball ammunition pods, although its design allows it to also be used to fill paintball hoppers. No other published U.S. patents or published pending U.S. patents that relate to paintball guns or associated devices describe art that is similar to the White device shown in this application.

#### BRIEF SUMMARY OF THE INVENTION

(007)The device described is a funnel device that can be quickly and securely inserted into the opening of the ammunition pod or the gun hopper. Once installed, the device makes it possible for the user to rapidly and easily pour paintballs from the bulk packages and refill the pods or hoppers. The described device utilizes a self-adjusting, multi-segmented insertion neck, which is comprised of a plurality of flexible tines that allows the device to self-adjust to the various sizes of pods. The flexible tines also provide outward spring tension, which is sufficient to hold the device securely to the ammunition pod.

## BREIF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

Figure 1 is a side view of the device.

Figure 2 is a top view of the device.

Figure 3 is a side view of the device showing how it attaches to an ammunition pod.

Figure 4 is a side view of the device showing it attached to an ammunition pod.

## DETAILED DESCRIPTION OF THE INVENTION

(008) Figures 1 and 2 show the component parts of the device. The device itself (1) is comprised of a bowl-shaped funnel (2). Into said funnel, the user pours a quantity of paintball projectiles. Said projectiles funnel through the internal neck (6) and into the ammunition pod or gun hopper. The device is attached to the pod by means of the self-adjusting, multi-segmented insertion neck (8), which is comprised of a plurality of flexible tines (4). Said tines are arranged in a radial pattern. The self-adjusting, multi-segmented insertion neck of the device is inserted linearly into the ammunition pod filling port (7) until it comes in contact with the shoulder (5) of the device, which terminates the linear travel of the device and firmly seats it on the ammunition pod. The flexible tines allow the device to self-adjust to the various sizes of pods and provide an outward spring tension, which is sufficient to hold the device securely to the pod while it is in use. The external neck (3) provides an area to which the user can grasp the device and either attach it to, or detach it from the pod. Once installed on a pod, the device allows the user to rapidly and safely pour paintballs into a pod or gun hopper with minimal possibility of spillage.

(009) The device shown permits the user of a paintball gun to rapidly and safely refill ammunition pods. The neck diameter of pods that are manufactured by different companies may vary slightly. The flexible design of the self-adjusting, multi-segmented insertion neck of the disclosed device allows the device to be attached to virtually all brands of ammunition pods.

(010)The device should be constructed of a high-impact plastic material such as polycarbonate, PVC, or ABS. A collapsible version of the device could be constructed of reinforced fabric, paper, or cardboard, so long as the insertion neck of the device is constructed of a high-impact plastic material. It is advantageous for the device to be molded in a transparent or translucent plastic in order to make it easier for the user to see the balls as they flow into, and fill the ammunition pod. The singular device shown may also be produced in a plural design with the individual devices arranged in either a linear pattern or a radial pattern. This multiple arrangement would allow the user to fill several ammunition pods simultaneously.